

APPLICATION

FOR

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TITLE: PORTABLE PROCESSOR-BASED SYSTEM

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PORTABLE PROCESSOR-BASED SYSTEM

Background

This invention relates generally to processor-based systems and particularly to so-called portable or battery-
5 powered processor-based systems.

A web tablet is a portable processor-based system that enables wireless access to the Internet. The web tablet can be moved about a building, such as a house, to enable web interaction at locations not typically occupied by
10 processor-based systems such as desktop computers. For example, a user may access the Internet from a kitchen or a living room through the web tablet.

The web tablet may include a wireless link, such as a radio frequency link, to a base station that may be, for
15 example, a desktop computer. The user can view information at essentially any location reasonably proximate to the base station. For example, web tablets may be used to view information from the Internet, to accomplish instant messaging or chat sessions or even desk top functions to
20 mention a few examples. The web tablet may interact with other appliances such as televisions. For example, a television program may have an associated Internet web page and that page may be viewed at the same time the television

program is being watched. Also, the web tablet may be used like a remote control to control appliances.

Since web tablets generally have either no keyboards or only a limited keyboard, it is important that other
5 controls be highly functional. Thus, there is a need for better ways to control the display of information on portable processor-based systems such as web tablets.

Brief Description of the Drawings

Figure 1 is a front view of one embodiment of the
10 present invention;

Figure 2 is a back view of the embodiment shown in Figure 1;

Figure 3 is a right side view of the embodiment shown in Figure 1;

15 Figure 4 is a cross-sectional view taken generally along the line 4-4 in Figure 1;

Figure 5 is a perspective view of the embodiment shown in Figure 1 in use; and

20 Figure 6 is a block depiction of one embodiment of the present invention.

Detailed Description

Referring to Figure 1, a portable processor-based system 10 may include a housing 12, a display screen 14 and plurality of fast-on buttons 16. In one embodiment of the
25 present invention, the portable processor-based system 10

is a web tablet that enables wireless access to the Internet through a base station (not shown in Figure 1). The housing 12 may be generally book-shaped and may be dominated by the display screen 14 and a peripheral housing portion 12 including control devices such as an instant
5 print button 17, a forward and backward rocker 26 and a vertical scroll wheel 18.

The vertical scroll wheel 18 is essentially a roller wheel that may be rotated to move the displayed information
10 up and down on the display screen 14. This is particularly useful when an entire web page can only be shown in part on the display screen 14. In such case, the web page must be scrolled in order to view all the information.

The fast-on button 16 allows the system 10 to be
15 immediately activated to a start page that is selectably programmable by the user. Thus, a variety of different web pages may be selected through any of the buttons 16.

Similarly, the button 17 allows the currently displayed screen display to be printed. The rocker switch
20 26 allows the user to rock the switch to the left or right to go forward to the next page or backward to the previous web page being viewed.

Referring next to Figure 2, the backside of the housing 12 may include a stylus 24 mounted magnetically on
25 the housing 12. The wheel roller 18 extends through a depression 22 on the backside of the housing 12. The same

wheel 18 extends through the depression 20 on the front side of the housing 12, as shown in Figure 1.

The stylus 24 may be utilized to handwrite on the display screen 14. Handwriting analysis technology may be
5 utilized to receive the handwriting as an input signal to the system 10.

As shown in Figure 3, the scroll wheel 18 extends through the depressions 20 and 22 on opposite sides of the housing 12. Thus, the wheel 18 may be manipulated between
10 the user's thumb and forefinger from both sides of the housing 12 around the rightmost edge of the housing as depicted in Figure 5. As shown in Figure 4, the wheel 18 extends completely through the housing 12.

Thus, as shown in Figure 5, the user may grasp the
15 right side of the device 10 with the user's thumb over the wheel 18 on the display side of the housing 12 and the user's forefinger over the wheel 18 on the backside of the housing 12. In this way, the user can skillfully manipulate the display up and down by the coordinated
20 movement between the user's thumb and forefinger. No extra effort is required because the user must hold the system 10 in the user's hand A in substantially this position in any case.

Referring to Figure 6, the system 10 may include a
25 controller or other processor-based device 30. The controller 30 may be coupled to the fast-on buttons 16, the

print button 17, the scroll wheel 18, a display 14, a touch
screen input device 15 and the forward and reverse rocker
26. In addition, the controller 30 may be coupled to a
wireless interface 32. A battery 34 may be provided. The
5 wireless interface 32 allows the system 10 to communicate
with a base station 36 which may be another processor-based
system such as a desktop computer, a set-top box, a
processor-based appliance or any other processor-based
system. The communication may be by a suitable radio
10 frequency protocol including a cellular telephone link, a
Bluetooth link (see Bluetooth Specification, Version 1,
December 1, 1999), an 802.11 Wireless LAN Standard
(Institute of Electrical and Electronics Engineers, 1999,
New York, New York) link, or other wireless protocols. In
15 addition, an infrared communication protocol may be used as
well.

In some embodiments, the system 10 may also interact
with an appliance such as a television. Infrared ports
(not shown) on the system 10 may be used to remotely
20 control appliances. Also the system 10 may include a
microphone and speaker (not shown) to act as a telephone as
well.

While the present invention has been described with
respect to a limited number of embodiments, those skilled
25 in the art will appreciate numerous modifications and
variations therefrom. It is intended that the appended

claims cover all such modifications and variations as fall within the true spirit and scope of this present invention.

What is claimed is:

1. A method of determining a value of a function of a variable, the method comprising: receiving a value of the variable; and determining the value of the function of the variable based on the received value of the variable.